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10/716,248	11/17/2003	David M. Tucker	205-0034USRI	5207

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EXAMINER

ROGERS, DAVID A

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2856

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/716,248	Applicant(s) TUCKER ET AL.	
	Examiner DAVID A. ROGERS	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 08 August 2008.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) 10 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/8/08, 6/28/06, 3/3/06, 3/11/05.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Continued Examination Under 37 C.F.R. 1.114

1. A request for continued examination under 37 C.F.R. 1.114, including the fee set forth in 37 C.F.R. 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 C.F.R. 1.114, and the fee set forth in 37 C.F.R. 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 C.F.R. 1.114.

Claim Rejections - 35 U.S.C. § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The applicant's written description provides the following with regard to the types of pumps conceived of for the patent under reissue:

Column 4 (lines 65-67) through column 5 (lines 1-3) Referring to FIG. 6, the SV 18 then closes free flowing valve 51 on the panel 24. A line 42 from the fill and test package 40, specifically from a high volume pump, is connected to port 56 on the panel 24 and valve 57 is opened. Seawater is pumped through line 42 and the panel 24 and out opening 55 to force pig 22 toward the pig receiver 30.

Column 5 (lines 26-42) Referring now to FIG. 9, SV 18 uses robotic arm 19 to stab line 42 from the fill and test package 40, specifically from a high pressure pump, into the hot stab 56 on the panel 24 and valves 57 and 60 are opened. It is recognized that, depending on the specific application, it may be preferred to perform these steps in a different sequence, and it

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may be preferred to connect the pump to either the launcher/receiver or receiver end of the pipeline for hydrostatic testing. Seawater is pumped through line 42 to increase the pressure in the pipeline 16 to testing level. The pressure is monitored by pressure gauge 58 and data recorder 63. The test pressure is maintained for a length of time to make certain that there are no leaks in the pipeline 16. Any drop in pressure indicates a problem and the first measure may be to repressure to test pressure and wait another length of time to make certain the pipeline 16 will maintain pressure

Column 7 (lines 1-5)

There may be three separate pumps on the fill and test package 40 or two pumps, the low volume high pressure pump being able to operate both to add water to the pipeline 16 or as a dewatering pump to suck water from the pipeline 16, or just one pump.

The applicant's written description makes it clear that the high pressure pump needed is one that needed by a is one that can produce the high pressure in a pipeline located on the floor of the sea sufficient for hydrostatic testing. However, the terms "low volume high pressure" and high volume" in claim 2 are relative terms which renders the claim indefinite. The term "low volume high pressure" and high volume" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. There is nothing in the written description, as originally filed, that allows the one of ordinary skill in the art to determine what types of pumps are encompassed by the applicant's claims.

4. New claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 7 and 8 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the replies filed 11 March 2005, 21 June 2005,

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and 07 December 2005. In those papers the applicant has stated the prior art does not teach pumps that are subsea, and this statement indicates that the invention is different from what is defined in the claim(s) because claims 7 and 8 states that the submersible vehicle operates a pump on a fill and test package, but there is actually no recitation that the fill and test package/pump combination is actually located and operated subsea. It is requested that these claims be amended to positively state that the fill and test package is deployed subsea to the pipeline where the pump is operated by a submersible vehicle.

Claim Rejections - 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 6 and 7 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by "BJ Process and Pipeline Services Completes Major Pipeline Pre-commissioning Operation for DSND", hereinafter referred to as BJ PPS.

BJ PPS, however, teaches that it is known to provide a ROV-operated pump as a fill and test package in order to force a liquid into a subsea pipeline (the Roncador Marlim Sul fields) for hydrostatic testing¹. This pump must inherently be a "high pressure" pump in order to obtain the hydrostatic pressures needed for testing the

¹ This would appear to be the same effort referenced by John Everard during his September 2004 deposition in which he confirmed that the ROV carried the pump to the pipeline for hydrostatic testing of the Roncador Marlim Sul fields. See pages 15-17 of the Everard deposition disclosed and made of-record by the applicant on 11 March 2005.

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pipeline. The article describes the efforts as being for pre-commissioning. Therefore this effort would be before the ends of the pipeline are connected.

Claim Rejections - 35 U.S.C. § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 4, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over “Vessel-Free Flooding of Deepwater Pipelines Using the Copipe SPU” to Graves in view of BJ PPS.

Graves teaches that it is known to provide a subsea pipeline that requires testing; to provide a subsea pigging unit (SPU) as a package having a pump; and providing a remotely operated vehicle (ROV) to provide power to the pump on the SPU. Official notice is hereby taken that manifolds for the ends of the pipeline are known and would have been used so that the pipeline could be connected to the well head and/or to other pipeline sections after successful commissioning.

In use the SPU of Graves will use the existing hydrostatic pressure of the seawater (the static pressure of the seawater at the depth of the pipeline) to initially flood the pipeline and force the pig through the pipeline. Flow of the seawater into the pipeline is controlled using a venturi nozzle and flow control valves so as to not damage the pipeline. When the pressure within the pipeline begins to equalize with the surrounding static pressure of the seawater the pig will no longer traverse the pipeline.

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At this point the ROV will provide power to the pump to pump seawater into the pipeline so that the pig can be successfully moved to the opposite end of the pipeline. Graves also teaches future work where hydrotest pumps will be used for hydrotesting operations². Graves does not expressly teach that the pump is a high pressure pump dimensioned to provide hydrostatic pipeline testing pressure.

BJ PPS, however, teaches that it is known to provide a ROV-operated pump as a fill and test package in order to force a liquid into a subsea pipeline (the Roncador Marlim Sul fields) for hydrostatic testing. This pump must be a "high pressure" pump in order to obtain the hydrostatic pressures needed for testing the pipeline.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Graves with the teachings of BJ PPS in order to dimension the pump on the ROV-operated package so as to provide sufficient pressure to hydrostatically test the pipeline using seawater so that the need for carrying glycol as a test medium is eliminated.

With regard to claim 4 official notice is hereby taken that hydrostatic testing is known to be used to obtain a static pressure in the pipeline, and to monitor the pressure so as to provide an indication of a leak in the pipeline.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graves and BJ PPS as applied to claim 4 above, and further in view of United States Patent 5,927,901 to Graves, hereinafter referred to as Graves-2.

² It is noted that the applicant herein describes "hydrotesting" as a process for new sections of pipeline "to make certain that the line has no leaks and in some cases, contains no water. In addition to hydrotesting, other steps in the commissioning of the pipeline may be required, including dewatering, drying, cleaning, and installing chemicals."

Graves and BJ PPS teach the use of an ROV-operated pump to force seawater into a pipeline for hydrostatic testing. Graves and BJ PPS do not expressly teach the use of an ROV with a robotic arm.

Graves-2 teaches that it is known to provide ROVs with robotic arms to aid in manipulation of various elements, including connecting operations. Official notice is hereby taken that the ROV and robotic arm would have been used to perform the necessary disconnecting operations so that the various elements could be disconnected when the fill/test operations were complete.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Graves and BJ PPS with the teachings of Graves-2 in order to provide a robotic arm on an ROV so that connecting and disconnecting operations can be performed.

Allowable Subject Matter

10. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The 30 August 2004 deposition of Mike Dupre clearly indicates, at pages 25-30, that using high-pressure pumps powered by an ROV and coupled to ROV-mounted skids before June 2000 was an established practice in the art of hydrotesting subsea pipelines. It is also clearly indicated that the equipment needed for hydrotesting subsea pipelines already existed.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID A. ROGERS whose telephone number is (571)272-2205. The examiner can normally be reached on Monday - Friday (0730 - 1600). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David A. Rogers/
Primary Examiner, Art Unit 2856